U. TED STATES ENVIRONMENTAL PROTEC. N AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

14-1926

REPLY TO THE ATTENTION OF
SR-6J

February 18, 1997

Scott Cornelius
Michigan Department of Environmental Quality, Superfund Section
P.O. Box 30426
Lansing, Michigan 48909

Dear Mr. Cornelius:

I have reviewed the draft Proposed Plan and some of the supporting documents for the remedy selection at the 12th Street Landfill Operable Unit. I do not disagree with the proposed alternative, but I believe that more detail is desirable in describing the conditions, risks and the proposed alternative in the Proposed Plan. Since I have not yet received the Focused Feasibility Study, it is possible that some of this detail is already provided in that document. I believe that better supporting documentation should be referenced and developed to document the Site risks. My specific comments on the draft Proposed Plan and some of the supporting documentation are at t ached. I have already discussed most of these comments with you.

If you have any questions or comments, feel free to contact me at (312) 886-4740.

Sincerely yours,

Richard E. Boice

Richard E. Boice
Remedial Project Manager

COMMENTS ON DRAFT PROPOSED PLAN
AND SOME SUPPORTING DOCUMENTS
BY RICHARD BOICE

INTRODUCTION:

Par. 2: U.S. EPA personnel and organizations outside of Region V are also providing support to MDEQ for completion of the RI/FS.

Par. 3: I have not yet received the Focused Feasibility Study. I suggest that you define the portions of the Risk Assessment report for the King Highway Landfill that are applicable to the 12th Street Landfill. For example, was PCDD/PCDF detected at the 12th Street Landfill as they were at the King Highway Landfill? The King Highway Risk Assessment identifies a number of parameters exceeding Type B drinking water standards, but these were not identified for the 12th Street Landfill. Is dike failure a potential concern at 12th Street Landfill as it is at King Highway Landfill?

I suggest that a memorandum be prepared updating the risk estimates conducted at the King Highway Landfill for the 12th Street Landfill since the RME appears to be considerably higher at the 12th Street Landfill.

I suggest that a memorandum be prepared assessing the risks from ingestion of fish to the Angler.

The "Draft Risk Assessment King Highway Landfill" contains an incorrect statement regarding the future ecological impacts from the PCB contamination in the wetlands and river sediments, and includes a misleading statement that "Ecological effects of PCB at the KHL-OU are not apparent." (p. 18). It contains very little information on ecological impacts including no quantified risk estimates. It also seems to minimize the value of the affected wetlands and habitat. On the other hand, the Kalamazoo River Ecological Risk Assessment contains a wealth of information on ecological impacts including quantitative benchmarks for ecological risks This report makes it clear that ecological risks are substantial, and documents those risk clearly, including actual measurements of PCBs in fish and wildlife, and modeling to demonstrate that the observed levels of PCB contamination can be attributed to the sediment and soil contamination. Although the human health risks are documented, they depend on hypothetical exposure scenarios, and the estimated risks from the RME are within the "acceptable risk range". As a result, the human health risks may not be convincing in justifying the remedial action, if it is challenged in Court. Therefore, I suggest that the Kalamazoo River Ecological Risk Assessment be incorporated into the Administrative Record for this Site and be referenced in the Proposed Plan

Par. 4: Pursuant to 40 CFR 300.430(f)(4)(iii), remedy selection shall entail either joint selection between the State and EPA or selection by EPA. Therefore, EPA's role is not properly characterized as simply consultation.

Site History

Information on how contaminated paper residual came to be located in the wetlands and river should be included.

Site Layout Map

The Site Layout Map does not show the presence of a berm around the north, east and west sides of the Landfill. This berm is mentioned in the text.

RI/FFS Background

It should be explained that: the RI/FFS is being conducted by the PRPs under an agreement with MDEQ; that MDEQ is providing oversight of implementation of the RI/FFS with support from U.S. EPA; and that MDEQ (in consultation with U.S. EPA) has approval authority for the RI/FFS.

Investigation Findings

How stable is the landfill itself and its surrounding berm? What affect would removing the Plainwell Dam (which I understand is likely to occur in the future) have on the stability of the landfill.

How much of the waste is under the water table? What affect would removal of the Plainwell Dam, which is being considered, have on the water table, and on the quantity of waste below the water table?

What are the range of PCB concentrations in the landfill, in the wetland soils and in the river sediments? Is there concern about migration contamination in the ground water? Is there potential for erosion of PCBs from the landfill surface?

Evaluation of Site Risks

Based on the concentration range reported in the RI Report, it appears likely that the RME PCB concentration is significantly higher at the 12th Street Landfill. It is advised that a memorandum be prepared to report the actual RMEs and risk estimates for the 12th Street Landfill.

Par. 2: I read the "Draft Risk Assessment King Highway Landfill" (May 1994) but observed no discussion of which exposure pathway the remedial action should address. The conclusion regarding which exposure pathways need to be addressed at the 12th Street Landfill needs to be adequately supported. It is noted that release of residuals to the Kalamazoo River is an exposure pathway to be addressed. However, the mechanism for this release needs to be identified as: 1. continued release of PCBs to the river sediments via erosion from the landfill; 2. catastrophic release of landfill contents due to failure of the berm (or some other mechanism); and/or 3. migration of PCBs through the ground water. The need to reduce exposure to humans and to ecological receptors should be noted.

Par. 3: Although there apparently are similarities between the 12th Street Landfill and the King Highway Landfill, there also may be significant differences. For example, is there reason for concern about the possibility of catastrophic failure of the berm at the 12th Street Landfill as there is at the King Highway Landfill? Are the PCB concentrations really similar? Are there similar percentages of wastes below the water table? Is there also concern about a dam removal at the King Highway Landfill? In addition, as summarized below, there are a number of inadequacies in the King Highway Risk Assessment. Therefore, it appears to me that simply referencing the King Highway Risk Assessment does not adequately addresses all the conditions at the 12th Street Landfill. I suggest preparation of a memorandum addressing the unique conditions at the 12th Street Landfill, correcting inadequacies in the King Highway Risk Assessment, and providing a summary of the actual risk estimates at the 12th Street Landfill.

Comparison of Risks and Remediation Goals

The first sentence in this Section is inconsistent with the description of the remediation goals in the previous Section since it does not address releases to the Kalamazoo River.

It is inappropriate to describe and announce the MDEQ preferred alternative or the no action alternative in this Section, since this is the explicit purpose of later Sections of the Proposed Plan. This Section should stick to the purpose defined in its title of presenting and comparing risks to remediation goals.

This Section should identify the receptors and the risks to these receptors that were determined to be unacceptable as a result of the risk assessment. This Section should identify the criteria that will be used for the wetland soil and sediment cleanup, including a PCB concentration that needs to be met in the cleanup verification sampling. Is a goal of the action to stabilize the landfill to prevent catastrophic failure? Is a goal of the action to prevent erosion from the landfill? Is a purpose of the action to reduce or minimize infiltration of precipitation through the landfilled

waste? Is ground water migration a concern?

Presumptive Remedy Approach

This Section should not announce MDEQ's preferred alternative since this is the function of a later Section. Furthermore, from the way it is written, it appears that MDEQ had already decided on its preferred remedy before the evaluation was completed.

Alternative 2: Landfill Closure

It should be noted in this Section that as part of the ROD approval, the U.S. EPA Regional Administrator will need to approve a waiver, pursuant to 761.75(c)(4), of some TSCA chemical waste landfill requirements, which apply to excavated wetland soils and sediments that exceed 50 ppm of PCBs. This waiver will allow consolidation of this soil and sediment with the rest of the contaminated paper residuals onto the landfill and then covering and containing them under the final landfill cover. To approve this waiver the Regional Administrator must determine that the final remedial action will be protective, and that no significant reduction in risks would be gained by off-site disposal of the small quantity of consolidated soils and sediments that exceed 50 ppm of PCBs compared to containing these residuals under the final cover along with the bulk of the PCB contaminated residuals.

Will the planned eventual removal of the Plainwell Dam result in lowering of the water table, potentially accompanied by subsidence of the soils under the landfill, which would affect the site cover?

How would contaminated wetland soils and sediments be dewatered?

It may be desirable to proposed the composition and thickness of the flexible membrane liner.

It is misleading to characterize the flexible membrane liner as "impermeable" since water can flow through the liner through holes in the liner, which always occur to some extent during installation. The infiltration through holes in the flexible membrane liner, will likely result in continued ponding of water over the low permeability paper residuals, and as a result there may not be a significant reduction in infiltration through the residuals. This could be prevented by construction of a composite barrier layer, in which a clay component below the flexible membrane liner prevents significant infiltration through holes in the liner. The clay component below the flexible membrane liner could be a geosynthetic clay layer, or the paper residual themselves could be used if they can be recontoured and compacted in a manner that would be protective.

What procedures would be used to dewater the contaminated wetland soils and sediments that are

to be consolidated on the landfill?

Sufficient soil should be placed over the flexible membrane liner to protect it against frost damage.

In the last sentence of the Section, the word "potential" should be removed.

Proposed residuals reconsolidation, landfill capping and revegetation

This Figure does not show the "berm" or "dike" that is reported to be present along the river side and other slopes of the landfill.

Overall Protection of Human Health and the Environment

Par. 2: The migration pathways and exposure routes that would be eliminated or controlled by Alternative 2, should be identified.

Reduction of Toxicity, Mobility, or Volume Through Treatment

The type of mobility that is being referenced in this Section is reduction in the innate mobility of a substance through treatment. The Site cover will not affect this type of mobility.

DRAFT RISK ASSESSMENT KING HIGHWAY LANDFILL

1. The RME for surface soils/residuals/sediments for exposure to on-site workers for King Highway Landfill is 1.9 mg/kg; for exposures to trespassers was 8 mg/kg; and for exposure to Anglers was 42 mg/kg. All of these RMEs appear to be much less than the appropriate RME would be for the 12th Street Landfill, where concentrations range as high as 158 mg/kg. Based on this, the estimated risks at the 12th Street Landfill are expected to be considerably higher than the estimated risks at the King Highway Landfill. A memorandum should be prepared providing site specific risk estimates for the 12th Street Landfill based on the RMEs appropriate for this Site.

2. The risk from exposures of Anglers to PCBs due to ingestion of fish should be included in the risk estimate. Since this is a base-line risk assessment, the assessment should assume exposures disregarding any government fishing restrictions or warnings. .

3. The statement in Section 3.6 that "No future impacts on ecological components are expected to occur if baseline conditions at the OU are maintained and the dike containment system is not compromised." ignores the ongoing exposures of wildlife to PCBs in the wetlands and river sediments.